ATTACHMENT D. FIELD CONSTRUCTION COST ESTIMATE WORKSHEETS, PLANS 1-5

1	Schedule Main Pipeline		[1		Ţ	Total	\$20 400 400
	wan ripenne		Steel Pipe Wall				IOtal	\$32,490,400
2	Length (ft)	Hydraulic (ID) Diameter (in)	Thickness (in) from Table 4-2* AWWA M11	Pounds	Unit Cost of Steel Pipe	Cost		
3	1,000.00	60	0.375	323110.00	\$2.00	\$646,220		
4	14,769.50	60	0.375	4772173.15	\$2.00	\$9,544,346		
5	14,769.50	57	0.3125	3964281.50	\$2.00	\$7,928,563		
6	10,234.11	45	0.25	1860049.49	\$2.00	\$3,720,099		
7	10,234.12	42	0.25	1457952.74	\$2.00	\$2,915,905		
8	6,796.77	33	0.1793	764296.79	\$2.00	\$1,528,594		
9	13,300.00	33	0.1793	861441.00	\$2.00	\$1,722,882		
10	9500	33	0.25	856140.00	\$5.00	\$4,280,700		
11	9,140.00	12	0.075	101545.40	\$2.00	\$203,091		
12					7	+,		
	Turnout and Crossing Pumping	····						
13	Plant 1 (MP7,2)	Quantity	Unit Quantity	Unit Cost	Cost	'	Total	\$155,00
14	Valves and Manifold	1	L.S.	\$100,000	\$100,000			ψ100,00
***************************************	Main Pipe 12" dia crossing under			\$ 100,000	4 700,000			
15	plant	80	l.f.	\$250	\$20,000			
16	Civil, Electrical	1	L.S.	\$35,000	\$35,000	 		
17		······································		\$00,000	Ψου,σου	 		
	T	······				-		
40	Turnout and Crossing Terrace	0	11.76					
18	Heights Pumping Plant	Quantity	Unit Quantity	Unit Cost	Cost	<u> </u>	Total	\$116,00
19	Valves and Manifold	11	L.S.	\$60,000	\$60,000			
	Main Pipe 33" dia crossing under							
20	plant	80	l.f.	\$450	\$36,000			
21	Civil, Electrical	1	L.S.	\$20,000	\$20,000			
22								
	Turnout and Crossing Pumping							
23	Plant 2 (MP16.8)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$308,50
24								
	Flow rate and PRV Valve w/							
25	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000			
26	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000			
	Manifold Piping - 16" to 36" dia.							
27	Steel pipe	25000	lb.	\$1.50	\$37,500			
28	Manifold Fabrication	25000	lb.	\$2.00	\$50,000			
29	Concrete slab and encasement	30	су	\$600.00			-	
30	Earthwork/sitework	1	L.S.	\$5,000.00				
31	Electrical/Control system	1	L.S.	\$20,000.00				
32	Fence	1	L.S.	\$3,000.00				
	Main Pipe 45" dia crossing under		1	ψο,οσο.σσ	Ψ0,000	 		
33	plant	100	l.f.	\$700.00	\$70,000			
34	pian	100	1-1-	\$700.00	\$70,000			
35	Turnout and Crossing Pumping Plant 3 (MP 22.5)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$348,50
36								
	Flow rate and PRV Valve w/	_			l			
37	CheckValve feature - 16"	- 5	ea	\$15,000.00				
38	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000			
	Manifold Piping - 16" to 36" dia.							
39	Steel pipe	25000	lb.	\$1.50				
40	Manifold Fabrication	25000	lb.	\$2.00				
41	Concrete slab and encasement	30	су	\$600.00				
42							· · · · · · · · · · · · · · · · · · ·	
	Earthwork/sitework	1	L.S.	\$5,000.00				
43	Earthwork/sitework Electrical/Control system	1 1		\$5,000.00 \$20,000.00				
			L.S.		\$20,000			
43 44 45	Electrical/Control system	1 1	L.S. L.S.	\$20,000.00	\$20,000 \$3,000			
43 44 45 46	Electrical/Control system Fence Main Pipe 60" dia crossing under plant	1	L.S. L.S. L.S.	\$20,000.00 \$3,000.00	\$20,000 \$3,000			
43 44 45 46 47	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY)	1	L.S. L.S. L.S.	\$20,000.00 \$3,000.00	\$20,000 \$3,000			
43 44 45 46 47 48	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation	1 1 1 100	L.S. L.S. L.S.	\$20,000.00 \$3,000.00 \$1,100.00	\$20,000 \$3,000 \$110,000		Total	\$2,543,29
43 44 45 46 47 48 49	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter	1 1 100 Length	L.S. L.S. L.S. I.f. Unit Quantity	\$20,000.00 \$3,000.00 \$1,100.00 Quantity	\$20,000 \$3,000 \$110,000 Unit Cost	Cost	Total	\$2,543,29
43 44 45 46 47 48 49 50	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60	1 100 100 Length 1,000.00	L.S. L.S. L.S. I.f. Unit Quantity 8.47	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00	\$42,350		\$2,543,29
43 44 45 46 47 48 49 50 51	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60	1 100 100 Length 1,000.00 14,769.50	L.S. L.S. L.S. I.f. Unit Quantity 8.47	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00	\$42,350 \$625,488		\$2,543,29
43 44 45 46 47 48 49 50 51	Electrical/Control system Fence Main Pipe 60° dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57	1 100 100 Length 1,000.00 14,769.50	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098 118,318	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00	\$42,350		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57	1 100 Length 1,000.00 14,769.50 14,769.50 10,234.11	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00	\$42,350 \$625,488		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53 54	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57 45	1 100 100 Length 1,000.00 14,769.50	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098 118,318	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57	1 100 Length 1,000.00 14,769.50 14,769.50 10,234.11	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098 118,318 64,587	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592 \$322,937		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53 54	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57 45	1 100 Length 1,000.00 14,769.50 10,234.11 10,234.12	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31 5.92	\$20,000.00 \$3,000.00 \$1,100.00 Quantity 8,470 125,098 118,318 64,587 60,555	\$20,000 \$3,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592 \$322,937 \$302,776 \$163,530		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53 54 55	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57 45 42 33	1 100 Length 1,000.00 14,769.50 10,234.11 10,234.12 6,796.77	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31 5.92 4.81	\$20,000.00 \$3,000.00 \$1,100.00 \$1,100.00 Quantity 8,470 125,098 118,318 64,587 60,555 32,706	\$20,000 \$3,000 \$110,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592 \$322,937 \$302,776 \$163,530 \$319,998		\$2,543,29
43 44 45 46 47 48 49 50 51 52 53 54 55 56	Electrical/Control system Fence Main Pipe 60" dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 60 57 45 42 33 33 33	1 100 100 Length 1,000.00 14,769.50 14,769.50 10,234.11 10,234.12 6,796.77 13,300.00	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31 5.92 4.81 4.81	\$20,000.00 \$3,000.00 \$1,100.00 \$1,100.00 Quantity 8,470 125,098 118,318 64,557 60,555 32,706 64,000	\$20,000 \$3,000 \$110,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592 \$322,937 \$302,776 \$163,530		\$2,543,29;
43 44 45 46 47 48 49 50 51 52 53 54 55 56 57	Electrical/Control system Fence Main Pipe 60° dia crossing under plant Earthwork (CY) Excavation Diameter 60 60 57 45 42 33 33 33	1 100 100 Length 1,000.00 14,769.50 14,769.50 10,234.11 10,234.12 6,796.77 13,300.00	L.S. L.S. L.S. I.f. Unit Quantity 8.47 8.47 8.01 6.31 5.92 4.81 4.81	\$20,000.00 \$3,000.00 \$1,100.00 \$1,100.00 Quantity 8,470 125,098 118,318 64,557 60,555 32,706 64,000	\$20,000 \$3,000 \$110,000 \$110,000 Unit Cost \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00 \$5.00	\$42,350 \$625,488 \$591,592 \$322,937 \$302,776 \$163,530 \$319,998		\$2,543,29;

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61	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
62	60	1,000.00	0.16	164	\$25.00	\$4,100		
63	60	14,769.50	0.16	2,422	\$25.00	\$60,555		
					\$25.00			
64	57	14,769.50	0.16	2,334		\$58,340		
65	45	10,234.11	0.09	921	\$25.00	\$23,027	i	
66	42	10,234.12	0.09	890	\$25.00	\$22,259		
67	33	6,796.77	80.0	517	\$25.00	\$12,914	I	
68			0.08	1,011	\$25.00	\$25,270		
	33	13,300.00						
69	12	9,140.00	0.04	338	\$25.00	\$8,455		
70							1	
71	Embedment (.7)				·······		Total	\$1,987,141
			11-11-0	Quantity	11-3-0-4	10	10141	ψ1,007,111
72	Diameter	Length	Unit Quantity		Unit Cost	Cost		
73	60	1,000.00	1.52	1,524	\$25.00	\$38,100		
74	60	14,769.50	1.52	22,509	\$25.00	\$562,718		
75	57	14,769.50	1.40	20,736	\$25.00	\$518,409		
					\$25.00			
76	45	10,234.11	0.97	9,937		\$248,433		
77	42	10,234.12	0.87	8,945	\$25.00	\$223,616	l	
78	33	6,796.77	0.61	4,153	\$25.00	\$103,821		
79	33	13,300.00	0.61	8,126	\$25.00	\$203,158		
80	12	9,140.00	0.39	3,555	\$25.00	\$88,887		
81								
82								
83	Composted Bookfill						Total	\$2,227,926
	Compacted Backfill		11-11-0 :::	t	Den C	1000	i olai	ψε,εει,320
84	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
85	60	1,000.00	5.79	5,790	\$6.00	\$34,740		
86	60	14,769.50	5.79	85,515	\$6.00	\$513,092		
		14,769.50	5.56	82,045	\$6.00	\$492,267		
87	57							
88	45	10,234.11	4.65	47,548	\$6.00	\$285,286		
89	42	10,234.12	4.43	45,306	\$6.00	\$271,839		
90	33	6,796.77	3.79	25,739	\$6.00	\$154,436		
				50,367				
91	33	13,300.00	3.79		\$6.00	\$302,203		
92	12	9,140.00	3.17	29,010	\$6.00	\$174,062		
93								
			 					
94			1					
95	Farm Turnout Tees and Valves						Total	\$59,250
96	Size	Quantity	Unit Cost	Cost				
97	in	ea	\$/ea	\$				
								
98	14 (PP#1, MP 7.2)	1	\$3,000.00	\$3,000.00				
99	8	3	\$1,385.00	\$4,155.00				
100	6	12	\$1,150.00	\$13,800.00				
101	4	19	\$905.00	\$17,195.00		† · · · · · · · · · · · · · · · · · · ·		
102	2	3	\$700.00	\$2,100.00				
103	Installation	38	\$500.00	\$19,000.00				
104								
105	DDV and Value Vaule		 				Total	\$589,000
	PRV and Valve Vaults			<u> </u>			10tai	\$369,000
106	Size	Quantity	Unit Cost	Cost				
107	in	ea	\$/ea	\$				
108	14 (PP#1, MP 7.2)	1	\$30,000.00	\$30,000.00				
								
109	8	3	\$17,000.00	\$51,000.00				
110	6	12	\$14,000.00	\$168,000.00				
111	4	19	\$12,000.00	\$228,000.00				
112	2	3	\$12,000.00	\$36,000.00				
								ļ
113	Installation	38	\$2,000.00	\$76,000.00				
114								
115		<u> </u>	1	1.		1		
116	Flow Meters and Precast Vaults	 	+		 		Total	\$200,500
		 	1	+	 		i Ulai	φ200,300
117	Size	Quantity	Unit Cost	Cost	ļ		<u> </u>	
118	in	ea	\$/ea	\$	L			
119	10 (PP #1, MP 7.2)	1	\$7,000.00	\$7,000.00		1	l	
120	8	3	\$5,500.00	\$16,500.00				
			\$4,500.00	\$54,000.00			 	
121	6	12					 	
122	4	19	\$4,000.00	\$76,000.00			<u> </u>	
123	2	3	\$3,000.00	\$9,000.00	1		L	
124	Installation	38	\$1,000.00	\$38,000.00		<u> </u>	1	I
	matanatum	 	\$1,000.00	\$55,555.00	 		 	
125	<u> </u>			<u></u>	}		<u> </u>	
126	Steel Pipe Xings for Turnouts	L	L	<u> </u>			Total	\$564,000
127		Quantity	Unit Cost	Cost			1	
128	Size			\$54,000.00	 			
129			\$18,000,00		1	4		
1 4.303	Steel Pipe Xings - 10"	3	\$18,000.00		4			
			\$18,000.00 \$15,000.00	\$510,000.00	4			
130	Steel Pipe Xings - 10"	3			4			
130	Steel Pipe Xings - 10" Steel Pipe Xings - 6"	3 34			4		Total	\$190,000
130 131	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings	3	\$15,000.00 Unit Cost	\$510,000.00 Cost			Total	\$190,000
130 131 132	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24	3 34 Quantity	\$15,000.00 Unit Cost L.S.	\$510,000.00 Cost \$30,000.00			Total	\$190,000
130 131 132 133	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00	3 34 Quantity 1	\$15,000.00 Unit Cost L.S. L.S.	\$510,000.00 Cost \$30,000.00 \$10,000.00			Total	\$190,000
130 131 132	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24	3 34 Quantity	\$15,000.00 Unit Cost L.S.	\$510,000.00 Cost \$30,000.00			Total	\$190,000
130 131 132 133 134	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00	3 34 Quantity 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S.	\$510,000.00 Cost \$30,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00	3 34 Quantity 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S.	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00	3 34 Quantity 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S.	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00	3 34 Quantity 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00	3 34 Quantity 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00	3 34 Quantity 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137 138	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50	3 34 Quantity 1 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137 138 139	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00	3 34 Quantity 1 1 1 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137 138	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50	3 34 Quantity 1 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137 138 140	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00	3 34 Quantity 1 1 1 1 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000
130 131 132 133 134 135 136 137 138 139	Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00	3 34 Quantity 1 1 1 1 1 1 1 1 1	\$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$510,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$190,000

144	495+00	1	L.S.	\$10,000.00	I	Т	
145	508+00	1	L.S.	\$10,000.00			
146	837+00	1	L.S.	\$10,000.00			
147				4.070000			
148		······································					
149							
150	Special Structures	***************************************					
	Access Manholes, Airvalves						
151	(every 2000')	40	ea	\$7,000.00		Total	\$280,000
152						7.2	\$200,000
153	Fence Replacement	70000	l,f.	\$3.00		Total	\$210,000
154							42.0,000
155							
156							
157							
158							
159							
160	SCADA	L.S.	\$250,000.00			Total	\$250,000
161							
162	Subtotal w/o Mobilization						\$42,734,428
163	Mobilization 5%						\$2,100,000
164	Subtotal w/ Mobilization						\$44,834,428
165	Unlisted 15%						\$6,725,164
166	CONTRACT COST						\$52,000,000
167	Construction Contingences 25%						\$13,000,000
168	FIELD COST						\$65,000,000
169							
170							
171	Right-of-Way	100	acres	\$2,500.00		Tótal	\$250,000
172							***************************************
173							
174						.	

		Quantity	Unit Cost	Cost	Total	\$764,000
190	40" Tytan valve	2	\$150,000.00	\$300,000.00		
191	24" Tytan valve	1	\$25,000.00	\$25,000.00		
192	24" Pressure Relief Valve	1	\$25,000.00	\$25,000.00		
193	Control System		Lump Sum	\$75,000.00		
194	42" Isolation Vavles	4	\$24,000.00	\$96,000.00		
195	24" Isolation Vavles	2	\$9,000.00	\$18,000.00		
196	Manifold		Lump Sum	\$150,000.00		
197	Structure		Lump Sum	\$75,000.00		
198	Subtotal w/o Mobilization					\$764,000
199	Mobilization 5%					\$38,000
200	Subtotal w/ Mobilization					\$800,000
201	Unlisted 15%					\$120,000
202	CONTRACT COST					\$900,000
203	Construction Contingences 25%					\$225,000
204	FIELD COST					\$1,100,000
205						\$1,100,000
206						
207						
208						
209				1		
210			1			
211						

Project: Black Rock Project Assessment
Feature: Delivery System to Roza Irrigation District
\(\lambda\) - Full Exchange High Pressure Pipe with Pumping Plant at Roza Canal

1	Pumping Plant - 14,000 hp					\$6,000,000
2	ubtotal from Plan 1 (line 161, above)					\$42,734,428
3						7 := 1: -1, := 2
4	Revised Subtotal w/o Mobilization					\$48,734,428
5	Mobilization 5%					\$2,400,000
6	Revised Subtotal w/ Mobilization					\$51,134,428
7	Unlisted 15%					\$7,670,164
8	CONTRACT COST					\$59,000,000
9	Construction Contingences 25%					\$14,750,000
10	FIELD COST					\$74,000,000
11						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
12						
13	Right-of-Way	100	acres	\$2,500.00	Total	\$250,000
14						1-1111
15						

Project: Black Rock Project Assessment Feature: Delivery System to Roza Irrigation District Details: Plan 2 - High Pressure Pipe Beginning Hydraulic Gradeline: 1515 ft.

By: Wendy Christensen

Item	Schedule							
1	Main Pipeline						Total	\$11,954,557
2	Length (ft)	Hydraulic (ID) Diameter (in)	Steel Pipe Wall Thickness (in) from Table 4-2* AWWA M11	Pounds	Unit Cost of Steel Pipe	Cost		
3	1,000.00	60	0.3750	241830	\$2.00	\$483,660		
4	14,769.50	51	0.3125	2529719.96	\$2.00	\$5,059,440		
5	14,769.50	48	0.3125	2381729.57	\$2.00	\$4,763,459		
6	10,234.11	27	0.1563	475783.7739	\$2.00	\$951,568		
7	10,234.12	. 18	0.1046	227504.49	\$2.00	\$455,009		
- 8	6,796.77	15	0.1046	120710.64	\$2.00	\$241,421		
9								····
10								
11								
12								
13								·
14								
15	Turnout and Crossing Pumping Plant Terrace Heights	Ouantity.	Linit Overstite	11-3-01	0			
16		Quantity	Unit Quantity	Unit Cost	Cost		Total	\$104,000
16	Valves and Manifold Main Pipe 18" dia crossing under	1	L.S.	\$60,000.00	\$60,000.00			
17	plant	80	l.f.	\$300.00	\$24,000.00	1		
18	Civil, Electrical	1	L.S.	\$20,000.00	\$20,000.00	1		
19				, , , , , , , , , , , , , , , , , , , ,	1			
20	Turnout and Crossing Pumping Plant 2 (MP16.8)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$278,500
21								
	Flow rate and PRV Valve w/	,						
22	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000.00			
23	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
	Manifold Piping - 16" to 36" dia.							
24	Steel pipe	25000	lb.	\$1.50	\$37,500.00			
25	Manifold Fabrication	25000	lb.	\$2.00	\$50,000.00			
26	Concrete slab and encasement	30	су	\$600.00	\$18,000.00			
27	Earthwork/sitework	.1	L.S.	\$5,000.00	\$5,000.00			
28	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00			
29	Fence	1	L.S.	\$3,000.00	\$3,000.00			
30	Main Pipe 27" dia crossing under plant	100	l.f.	\$400.00	\$40,000.00			
31	Turnout and Crossing Pumping Plant 3 (MP 22.5)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$333,500
33	Flow rate and PRV Valve w/							
34	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000.00			
35	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
36	Manifold Piping - 16" to 36" dia. Steel pipe	25000	lb.	\$1.50	\$37,500.00			
37	Manifold Fabrication	25000	lb.	\$2.00	\$50,000.00			
38	Concrete slab and encasement	30	су	\$600.00	\$18,000.00			
39	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
40	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00			
41	Fence Main Pipe 51" dia crossing under	1	L.S.	\$3,000.00	\$3,000.00			
42	plant	100	l.f.	\$950.00	\$95,000.00			
43	<u> </u>							
44	Earthwork (CY)							
45	Excavation						Total	\$1,602,519
46	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
47	60	1,000.00	8.47	8,468	\$5.00	\$42,340		
48	51	14,769.50	7.14	105,395	\$5.00	\$526,976		
49	48	14,769.50	6.72	99,207	\$5.00	\$496,034		
50	27	10,234.11	4.14	42,359	\$5.00	\$211,795		
51	18	10,234.12	3.82	39,105	\$5.00	\$195,523		
52	15	6,796.77	3.82	25,970	\$5.00	\$129,852		
53								
54					I	I		
55	Total				I			
56								
57	Bedding						Total	\$114,170
58	3 Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		7,170
59	60	1,000.00	0.16	164	\$25.00	\$4,100		

		,						
60	51	14,769.50	0.10	1,433	\$25.00	\$35,816		
61	48	14,769.50	0.09	1,388	\$25.00	\$34,708		
62	27	10,234.11	0.07	706	\$25.00	\$17,654		
63	18	10,234.12	0.06	604	\$25.00	\$15,095		
64	15	6,796.77	0.04	272	\$25.00	\$6,797		
65								
66		·····				- 		
67						-		
68	Embedment (.7)						Total	\$1,151,690
69	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
70	60	1,000.00	1.52	1,524	\$25.00	\$38,100		
71	51	14,769.50	1.18	17,398	\$25.00	\$434,962		
72	48	14,769.50	1.07	15,833	\$25.00	\$395,823		
73	27	10,234.11	0.46	4,687	\$25.00	\$117,181		
74	18	10,234.12	0.39	3,981	\$25.00	\$99,527		·
75	15	6,796.77	0.39	2,644	\$25.00	\$66,099		
76								· · · · · · · · · · · · · · · · · · ·
77			·			-		
78 79						-		
	0					-		
80	Compacted Backfill		11 2 0 10			-	Total	\$1,449,208
81	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
82	60	1,000.00	5.79	5,790	\$6.00	\$34,740		
83	51	14,769.50	5.09	75,236	\$6.00	\$451,415	····	
84	48	14,769.50	4.87	71,913	\$6.00	\$431,476		
85	27	10,234.11	3.38	34,540	\$6.00	\$207,241		······································
86	18	10,234.12	3.17	32,483	\$6.00	\$194,899		·
87	15	6,796.77	3.17	21,573	\$6.00	\$129,438		
88						1		
90						-		
91	F					ļ		440 = 4 =
92	Farm Turnout Tees and Valves	0 - 13	11.20.			-	Total	\$43,515
93	Size	Quantity	Unit Cost	Cost		<u> </u>		
94	in	ea	\$/ea	\$		-		
95			64.005.00	04.455.00				
96	8	3	\$1,385.00	\$4,155.00		_		
97	6	12	\$1,150.00	\$13,800.00				
98	4 2	12	\$905.00	\$10,860.00				
99								
		1	\$700.00	\$700.00				
100	Installation	28	\$500.00	\$14,000.00				
100 101	Installation							
100 101 102	Installation PRV and Valve Vaults	28	\$500.00	\$14,000.00			Total	\$431,000
100 101 102 103	Installation PRV and Valve Vaults Size	28 Quantity	\$500.00 Unit Cost	\$14,000.00 Cost			Total	\$431,000
100 101 102 103 104	Installation PRV and Valve Vaults	28	\$500.00	\$14,000.00			Total	\$431,000
100 101 102 103 104 105	Installation PRV and Valve Vaults Size in	28 Quantity ea	\$500.00 Unit Cost \$/ea	\$14,000.00 Cost \$			Total	\$431,000
100 101 102 103 104 105 106	Installation PRV and Valve Vaults Size in 8	Quantity ea 3	\$500.00 Unit Cost \$/ea \$17,000.00	\$14,000.00 Cost \$ \$51,000.00			Total	\$431,000
100 101 102 103 104 105 106 107	Installation PRV and Valve Vaults Size in 8 6	Quantity ea 3 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00			Total	\$431,000
100 101 102 103 104 105 106 107 108	Installation PRV and Valve Vaults Size in 8 6 4	28 Quantity ea 3 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00			Total	\$431,000
100 101 102 103 104 105 106 107 108	Installation PRV and Valve Vaults Size in 8 6 4	28 Quantity ea 3 12 12 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00			Total	\$431,000
100 101 102 103 104 105 106 107 108 109	Installation PRV and Valve Vaults Size in 8 6 4	28 Quantity ea 3 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00			Total	\$431,000
100 101 102 103 104 105 106 107 108 109 110	Installation PRV and Valve Vaults Size in 8 6 4	28 Quantity ea 3 12 12 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00				\$431,000
100 101 102 103 104 105 106 107 108 109 110 111	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation	28 Quantity ea 3 12 12 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 111 112	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults	28 Quantity ea 3 12 12 12 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$12,000.00 \$212,000.00 \$56,000.00				\$431,000 \$149,500
100 101 102 103 104 105 106 107 108 109 110 111 111 112 113	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size	28 Quantity ea 3 12 12 12 28 Quantity	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults	28 Quantity ea 3 12 12 12 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$12,000.00 \$212,000.00 \$56,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in	Quantity ea 3 12 12 12 28 Quantity eae	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$				
100 101 102 103 104 105 106 107 107 108 109 110 111 112 113 114 115 116 117	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in	Quantity ea 3 12 12 12 28 Quantity ea Quantity ea	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 6 6 4 2 Installation	28 Quantity ea 3 12 12 12 1 28 Quantity ea 3 112	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 4 2 Installation	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 11 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$48,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 4 2 4 2 4 2 4 4 4 4 4 4 4 4 4 4 4	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 11 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$14,000.00 \$54,000.00 \$54,000.00 \$34,000.00 \$3,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 4 2 Installation	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 11 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$48,000.00				
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 11 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$14,000.00 \$54,000.00 \$54,000.00 \$34,000.00 \$3,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts	28 Quantity ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00				\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 121 122 123	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Size	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 12 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$3,000.00 \$1,000.00 Unit Cost	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$3,000.00 \$28,000.00 Cost Cost			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 122 123 124 125	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10"	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 12 12 12 12 10 28 Quantity 3 40 Quantity 3	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$3,000.00 \$1,000.00 Unit Cost \$1,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$14,000.00 \$54,000.00 \$28,000.00 \$28,000.00 Cost \$54,000.00 \$3,000.00 \$28,000.00			Total	
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 117 118 119 120 121 122 123 124 125 126	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Size	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 12 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$3,000.00 \$1,000.00 Unit Cost	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$3,000.00 \$28,000.00 Cost Cost			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 121 122 123 124 125 126 127	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Steel Pipe Xings - 10" Steel Pipe Xings - 6"	28 Quantity ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 12 12 28 Quantity 28	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$1,000.00 Unit Cost \$1,000.00 \$1,000.00 \$1,000.00 \$1,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$48,000.00 \$28,000.00 Cost \$54,000.00 \$3,000.00 \$3,000.00 \$3,000.00 \$3,000.00			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 121 122 123 124 125 126 127 128	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings	28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 12 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$28,000.00 Cost \$554,000.00 Cost \$554,000.00 Cost \$554,000.00 Cost			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size Size Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24	28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 12 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00 Cost \$330,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 4 28 Quantity 5 Quantity 7 Quantity 7 Quantity 1 1 1	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00 Unit Cost \$18,000.00 \$15,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$28,000.00 \$3,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00 \$110,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 120 121 121 122 123 124 125 126 127 128 129 120 121 121 121 122 123 124 125 126 127 128 129 120 121 121 121 122 123 124 125 126 127 128 129 120 121 121 121 122 123 124 125 126 127 128 129 129 120 120 121 121 122 123 124 125 126 127 128 129 120 120 121 125 126 127 128 129 120 120 121 125 126 127 128 129 120 121 125 126 127 128 129 129 120 121 121 125 126 127 128 129 129 120 120 121 125 126 127 128 129 129 120 120 121 125 126 127 128 129 129 129 120 120 121 125 126 127 128 129 129 129 120 120 120 120 120 120 120 120	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 12 12 12 12 28 Quantity 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S.	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$54,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00 Cost \$30,000.00 \$110,000.00 \$110,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 132	Installation	28 Quantity ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 12 12 12 12 12 12 11 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00 Cost \$30,000.00 \$11,000.00 \$11,000.00 \$11,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 132 133	Installation PRV and Valve Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00	28 Quantity ea 3 12 12 1 28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S.	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 Cost \$30,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 131 131 132 133 134	Installation	28 Quantity ea 3 12 12 12 12 12 12 12 12 12 12 12 12 12	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 \$1,000.00 Unit Cost \$18,000.00 \$1,000.00 Unit Cost \$18,000.00 \$1,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$11,000.00 \$110,000.00 \$110,000.00			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135	Installation	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 12 12 12 12 11 11 11 11 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S. L.S. L.S.	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$54,000.00 \$54,000.00 \$54,000.00 \$55,000.00			Total	\$149,500
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136	Installation	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 11 11 11 11 11 11 11 11 11 11 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$54,000.00 \$3,000.00 \$3,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 132 133 134 135 136 137	Installation	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 11 11 11 11 11 11 11 11 11 11 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$3,000.00 \$375,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500 \$429,000
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136	Installation	28 Quantity ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 11 11 11 11 11 11 11 11 11 11 11 11 11	\$500.00 Unit Cost \$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00	\$14,000.00 Cost \$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$54,000.00 \$3,000.00 \$3,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500 \$429,000

140	484+00 - Terrace Height Blvd.	1	L.S.	\$30,000.00			
141	495+00	1	L.S.	\$10,000.00			
142	508+00	1	L.S.	\$10,000.00			· · · · · · · · · · · · · · · · · · ·
143							····
144							
145							
146							
147	Special Structures						
***************************************	Access Manholes, Airvalves						
148	(every 2000')	30	ea	\$7,000.00		Total	\$210,000
149							42.10,000
150	Fence Replacement	50000	I.f.	\$3.00	<u> </u>	Total	\$150,000
151	· ·		T			7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4.00,000
152							
153							
154		***************************************			l		
155			· · · · · · · · · · · · · · · · · · ·				
156		***************************************			l		
157	SCADA	L.S.	\$200,000.00			Total	\$200,000
158						10.0.	Ψ <u></u>
159	Subtotal w/o Mobilization						\$18,781,160
160	Mobilization 5%						\$940,000
161	Subtotal w/ Mobilization						\$19,721,160
162	Unlisted 15%	***************************************					\$2,958,174
163	CONTRACT COST	***************************************					\$23,000,000
164	Construction Contingences 25%						\$5,750,000
165	FIELD COST			<u> </u>			\$29,000,000
166			1				
167				1	1		
168	Right-of-Way	90	acres	\$2,500.00		Total	\$225,000
169			T			, otal	40,000
170		***************************************		1	t		
171							

		Quantity	Unit Cost	Cost		Total	\$764,000
190	40" Tytan valve	2	\$150,000.00	\$300,000.00			
191	24" Tytan valve	1	\$25,000.00	\$25,000.00			
192	24" Pressure Relief Valve	1	\$25,000.00	\$25,000.00			
193	Control System		Lump Sum	\$75,000.00			
194	42" Isolation Vavles	4	\$24,000.00	\$96,000.00			***
195	24" Isolation Vavles	2	\$9,000.00	\$18,000.00		1	
196	Manifold		Lump Sum	\$150,000.00			
197	Structure		Lump Sum	\$75,000.00			
198	Subtotal w/o Mobilization						\$764,000
199	Mobilization 5%						\$38,000
200	Subtotal w/ Mobilization						\$800,000
201	Unlisted 15%						\$120,000
202	CONTRACT COST					1	\$900,000
203	Construction Contingences 25%						\$225,000
204	FIELD COST						\$1,100,000
205							
206							
207							
208							
209							
210							
211							

Project: Black Rock Project Assessment Feature: Delivery System to Roza Irrigation District Plan 2-A - High Pressure Pipe with Pumping Plant at Roza Canal

1	Pumping Plant - 12,000 hp		1	T		T	T T	\$5,250,000.00
2	ubtotal from Plan 2 (line 158, above	*)			1		T	\$18,781,160.15
3								
4	Revised Subtotal w/o Mobilization				1		 	\$24,031,160.15
5	Mobilization 5%							\$1,200,000.00
6	Revised Subtotal w/ Mobilization							\$25,231,160.15
7	Unlisted 15%				1.			\$3,784,674.02
8	CONTRACT COST							\$29,000,000.00
9	Construction Contingences 25%							\$7,250,000.00
10	FIELD COST							\$36,000,000.00
11								
12								
13	Right-of-Way	90	acres	\$2,500.00			Total	\$225,000.00
14							T	

Item	Schedule							
1	Main Pipeline						Total	\$11,545,821
2	Length (ft)	Hydraulic (ID) Diameter (in)	Steel Pipe Wall Thickness (in) from Table 4-2* AWWA M11	Pounds	Unit Cost of Steel Pipe	Cost		
3	1,000.00	60	0.25	160,890.00	\$2.00	321,780		
4	14,769.50	60	0.25	2,376,264.86	\$2.00	4,752,530		
5	14,769.50	60	0.25	2,376,264.86	\$2.00	4,752,530		
6	10,234.11	30	0.1046	364,743.68	\$2.00	729,487		
7	10,234.12	27	0.1046	341,819.61	\$2.00	683,639		
8	6,796.77	24	PVC		\$45.00	305,855		
9								
10								
11								
12		V-						
13								
14								
	Turnout and Crossing Pumping							
15	Plant Terrace Heights	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$113,800
16	Valves and Manifold	1	L.S.	\$60,000.00	\$60,000.00		TOTAL	ψ170,000
	Main Pipe 24" dia crossing under		 	\$00,000.00	400,000.00			
17	plant	80	l.f.	\$360.00	\$28,800.00			
18	Civil, Electrical	1	L.S.	\$25,000.00	\$25,000.00			
19	Own, Electrical	-1	L.3.	φευ,000.00	Ψευ,000.00			
13	Turnout and Crossing Pumping		 	 		 		
20		Ougatitu	Unit Ougntity	Unit Coat	Coot		Total	#0F6 000
20	Plant 2 (MP16.8)	Quantity	Unit Quantity	Unit Cost	Cost	ļi	Total	\$256,000
	Flow rate and DEVAY-Line							
	Flow rate and PRV Valve w/	_		#4# 000 00				
22	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000.00			
23	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
	Manifold Piping - 16" to 36" dia.							
24	Steel pipe	18,000	lb.	\$1.50	\$27,000.00			
25	Manifold Fabrication	18,000	lb.	\$2.00	\$36,000.00			
26	Concrete slab and encasement	30	су	\$600.00	\$18,000.00			
27	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
28	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00			
29	Fence	1	L.S.	\$3,000.00	\$3,000.00			
	Main Pipe 30" dia crossing under							
30	plant	100	l.f.	\$420.00	\$42,000.00			
31								
	Turnout and Crossing Pumping							
32	Plant 3 (MP 22.5)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$318,000
33								
	Flow rate and PRV Valve w/				1			
34	CheckValve feature - 16"	- 5	ea	\$15,000.00	\$75,000.00			
35	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
	Manifold Piping - 16" to 36" dia.			<u> </u>	<u> </u>			
36	Steel pipe	18,000	lb.	\$1.50	\$27,000.00			
37	Manifold Fabrication	18,000	lb.	\$2.00	\$36,000.00			
38	Concrete slab and encasement	20	су	\$600.00	\$12,000.00	1		
39	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00	†		
40	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00	<u> </u>		
41	Fence	i	L.S.	\$3,000.00	\$3,000.00			
T-	Main Pipe 60" dia crossing under		1	ψο,οοο.οο	ψο,οοο.οο	 		
42	plant	100	I.f.	\$1,100.00	\$110,000.00			
43	pian	100	5.1.	ψ1,100.00	Ψ1.50,000.00	1		
44	Earthwork (CY)		-	+	 			
45	Excavation	 			 	 	Total	\$1,000,000
46		Longile	Linit Oursette	Ougatit :	Hait Coot	Cost	iolai	\$1,863,350
46	Diameter	Length 1,000.00	Unit Quantity	Quantity	Unit Cost	Cost		
	60		8.47	8,468	\$5.00	42,340		
48	60	14,769.50	8.47	125,068	\$5.00	625,341		
49	60	14,769.50	8.47	125,068	\$5.00	625,341		
50	30	10,234.11	4.47	45,736	\$5.00	228,681		
51	27	10,234.12	4.14	42,359	\$5.00	211,795		
52	24	6,796.77	3.82	25,970	\$5.00	129,852		ļ
53		ļ			ļ	ļ		
54			-		 	 		
55	Total				 			
56				ļ	ļ	ļ		
57	Bedding				1		Total	\$172,330
58	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
59	60	1,000.00	0.16	164	\$25.00	4,100		
60	60	14,769.50	0.16	2,422	\$25.00	60,555		

C4 1	T	14 700 50	0.10	2,422	\$25.00	60 555		
61	60	14,769.50 10,234.11	0.16 0.07	737	\$25.00	60,555 18,421		
62 63	30 27	10,234.11	0.07	706	\$25.00	17,654		
			0.07	442	\$25.00	11,045		
64	24	6,796.77	0.07	442	\$25.00	11,045		
65								
66						 		
67	Fash admost (7)						Total	£1 400 000
68	Embedment (.7)	C Vi	11.00		Linit Cont	101	Total	\$1,482,929
69	Diameter	Length	Unit Quantity	Quantity 1,524	Unit Cost \$25.00	Cost		
70	60	1,000.00	1.52			38,100		
71	60	14,769.50	1.52	22,509	\$25.00	562,718		
72	60	14,769.50	1.52	22,509	\$25.00	562,718		
73	30	10,234.11	0.53	5,445	\$25.00	136,114		
74	27	10,234.12	0.46	4,687	\$25.00	117,181		
75	24	6,796.77	0.39	2,644	\$25.00	66,099		
76						·		
77						ļ		
78								
79								
80	Compacted Backfill						Total	\$1,617,432
81	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
82	60	1,000.00	5.79	5,790	\$6.00	34,740		
83	60	14,769.50	5.79	85,515	\$6.00	513,092		
84	60	14,769.50	5.79	85,515	\$6.00	513,092		
85	30	10,234.11	3.58	36,638	\$6.00	219,829		
86	27	10,234.12	3.38	34,540	\$6.00	207,241		
87	24	6,796.77	3.17	21,573	\$6.00	129,438		
88								
89								
90								
91								
92	Farm Turnout Tees and Valves						Total	\$43,515
93	Size	Quantity	Unit Cost	Cost				
94	in	ea	\$/ea	\$				
95								
96	8	3	\$1,385.00	\$4,155.00				
97	6	12	\$1,150.00	\$13,800.00				
98	4	12	\$905.00	\$10,860.00	····			
99	2	1	\$700.00	\$700.00				
100	Installation	28	\$500.00	\$14,000.00				
101			, , , , , , , , , , , , , , , , , , , ,	7 ,				
. 107	I PRV and Valve Vaults I			1			Total	\$431,000
102	PRV and Valve Vaults Size	Quantity	Unit Cost	Cost		-	Total	\$431,000
103	Size	Quantity	Unit Cost	Cost \$			Total	\$431,000
103 104		Quantity ea	Unit Cost \$/ea	Cost \$			Total	\$431,000
103 104 105	Size in	ea	\$/ea	\$			Total	\$431,000
103 104 105 106	Size in 8	ea 3	\$/ea \$17,000.00	\$ \$51,000.00			Total	\$431,000
103 104 105 106 107	Size in 8	ea 3 12	\$/ea \$17,000.00 \$14,000.00	\$ \$51,000.00 \$168,000.00			Total	\$431,000
103 104 105 106 107 108	Size in 8 6 4	ea 3 12 12	\$/ea \$17,000.00 \$14,000.00 \$12,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00			Total	\$431,000
103 104 105 106 107 108 109	Size in 8 6 4 2	ea 3 12 12 12 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00			Total	\$431,000
103 104 105 106 107 108 109	Size in 8 6 4	ea 3 12 12	\$/ea \$17,000.00 \$14,000.00 \$12,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00			Total	\$431,000
103 104 105 106 107 108 109 110	Size in 8 6 4 2	ea 3 12 12 12 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00			Total	\$431,000
103 104 105 106 107 108 109 110 111 112	Size in 8 6 4 2 Installation	ea 3 12 12 12 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00				
103 104 105 106 107 108 109 110 111 112 113	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults	ea 3 12 12 12 1 1 28	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size	ea 3 12 12 12 1 28 Quantity	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults	ea 3 12 12 12 1 1 28	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in	ea 3 12 12 1 12 1 28 Quantity ea	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$				
103 104 105 106 107 108 109 110 111 112 113 114 115 116	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in	ea 3 12 12 11 28 Quantity ea 3	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$14,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6	ea 3 12 12 12 1 28 Quantity ea 3 12	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 4	ea 3 12 12 11 28 Quantity ea 3 12 12 12	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119	Size in	ea 3 12 12 1 28 Quantity ea 3 12 12 12 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 4	ea 3 12 12 11 28 Quantity ea 3 12 12 12	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121	Size in	ea 3 12 12 1 28 Quantity ea 3 12 12 12 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00				
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size	ea 3 12 12 11 28 Quantity ea 3 12 12 12 1 28 Quantity Quantity	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$48,000.00 \$28,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10*	ea 3 12 12 11 28 Quantity ea 3 12 12 12 11 28 Quantity 3	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$1,000.00	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size	ea 3 12 12 11 28 Quantity ea 3 12 12 12 1 28 Quantity Quantity	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$48,000.00 \$28,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size in Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6*	ea 3 12 12 12 1 28 Quantity ea 3 12 12 1 28 Quantity 3 25	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$3,000.00 \$28,000.00 \$3,75,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6"	ea 3 12 12 12 1 12 1 28 Quantity ea 3 12 12 1 28 Quantity 3 25 Quantity 3 Quantity 3 Quantity	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 Cost \$ \$16,500.00 \$54,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00 \$375,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10' Steel Pipe Xings - 6' Road crossings Hwy 24	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 3 25 Quantity 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$15,000.00 Unit Cost \$15,000.00	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$16,500.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00 \$375,000.00 Cost \$30,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6* Road crossings Hwy 24 34+00	ea 3 12 12 11 28 Quantity ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$15,000.00 Unit Cost \$15,000.00	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$75,000.00 \$375,000.00 \$33,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10' Steel Pipe Xings - 6' Road crossings Hwy 24	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 3 25 Quantity 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	\$/ea \$17,000.00 \$14,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00 Unit Cost L.S. L.S.	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$28,000.00 \$75,000.00 \$375,000.00 \$30,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6* Road crossings Hwy 24 34+00	ea 3 12 12 11 28 Quantity ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S.	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$75,000.00 \$375,000.00 \$33,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$14,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00 Unit Cost L.S. L.S.	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$28,000.00 \$75,000.00 \$375,000.00 \$30,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation Size in Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6* Road crossings Hwy 24 34+00 147+00 178+00	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S.	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$3,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$30,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131	Size in	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 1 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 \$1,000.00 LS. L.S. L.S. L.S. L.S. L.S. L.S.	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$28,000.00 \$28,000.00 \$3,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135	Size in	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 1 1 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 LS. LS. LS. LS. LS. LS. LS.	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 Cost \$ \$ \$16,500.00 \$48,000.00 \$3,000.00 \$375,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136	Size in	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 11 11 11 11 11 11 11 11 11 11 11 11 11	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S. L.S. L.S. L.	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 130 131 132 133 134 135 136 137	Size in	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 \$15,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$28,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 132 133 134 135 136 137 138	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$375,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation 8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6* Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 4450+00 467+00	ea 3 12 12 11 28 Quantity ea 3 12 12 11 28 Quantity 11 11 11 11 11 11 11 11 11 11 11 11 11	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost \$18,000.00 L.S. L.S. L.S. L.S. L.S. L.S. L.	\$ \$51,000.00 \$168,000.00 \$144,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$54,000.00 \$3,000.00 \$3,000.00 \$375,000.00 \$10,000.00			Total	\$149,500
103 104 105 106 107 108 109 110 111 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138	Size in 8 6 4 2 Installation Flow Meters and Precast Vaults Size in 8 6 4 2 Installation 8 6 4 2 Installation Size in Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10* Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00	ea 3 12 12 12 1 28 Quantity ea 3 12 12 12 1 28 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$17,000.00 \$14,000.00 \$12,000.00 \$12,000.00 \$2,000.00 Unit Cost \$/ea \$5,500.00 \$4,500.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$ \$51,000.00 \$168,000.00 \$12,000.00 \$12,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$56,000.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$375,000.00 \$10,000.00			Total	\$149,500

142	508+00	1	L.S.	\$10,000.00		T	
143							
144							
145							
146							
147	Special Structures						
	Access Manholes, Airvalves						
148	(every 2000')	30	ea	\$7,000.00	1 .	Total	\$210,000
149							
150	Fence Replacement	50000	l.f.	\$3.00		Total	\$150,000
151							
152							
153							
154							
155							
156							
157	SCADA	L.S.	\$200,000.00			Total	\$200,000
158							
159	Subtotal w/o Mobilization						\$19,162,676
160	Mobilization 5%						\$960,000
161	Subtotal w/ Mobilization						\$20,122,676
162	Unlisted 15%						\$3,018,401
163	CONTRACT COST						\$23,000,000
164	Construction Contingences 25%						\$5,750,000
165	FIELD COST						\$29,000,000
166							
167							
168	Right-of-Way	90	acres	\$2,500.00		Total	\$225,000
169					1		
170							
171						l '	

		Quantity	Unit Cost	Cost		Total	\$764,000
190	40" Tytan valve	2	\$150,000.00	\$300,000.00			
191	24" Tytan valve	1	\$25,000.00	\$25,000.00			
192	24" Pressure Relief Valve	1	\$25,000.00	\$25,000.00			
193	Control System		Lump Sum	\$75,000.00			
194	42" Isolation Vavles	4	\$24,000.00	\$96,000.00			
195	24" Isolation Vavles	2	\$9,000.00	\$18,000.00			
196	Manifold		Lump Sum	\$150,000.00			
197	Structure		Lump Sum	\$75,000.00			
198	Subtotal w/o Mobilization						\$764,000
199	Mobilization 5%						\$38,000
200	Subtotal w/ Mobilization						\$800,000
201	Unlisted 15%			·			\$120,000
202	CONTRACT COST						\$900,000
203	Construction Contingences 25%						\$225,000
204	FIELD COST						\$1,100,000
205							
206							
207							
208							
209							
210							
211							

Project: Black Rock Project Assessment Feature: Delivery System to Roza Irrigation District Plan 3-A - Low Pressure Pipe with Pumping Plant at Roza Canal

1	Pumping Plant - 3,300 hp						\$2,000,000
2	ubtotal from Plan 3 (line 158, above)					\$19,162,676
3							
4	Revised Subtotal w/o Mobilization						\$21,162,676
5	Mobilization 5%						\$1,100,000
6	Revised Subtotal w/ Mobilization						\$22,262,676
7	Unlisted 15%						\$3,339,401
8	CONTRACT COST						\$26,000,000
9	Construction Contingences 25%						\$6,500,000
10	FIELD COST						\$33,000,000
11							
12							
13	Right-of-Way	90	acres	\$2,500.00		Total	\$225,000
14							
15							
16							

Item	Schedule							
11	Main Pipeline		Charles Well				Total	\$26,508,27
		Hydraulic (ID)	Steel Pipe Wall Thickness (in) from Table 4-2*					
2	Length (ft)	Diameter (in)	AWWA M11	Pounds	Pounds	Cost		
3	1,000.00	78	0.31	261,400.00	\$2.00	\$522,800		
4	14,769.50	78	0.31	3,860,747.30	\$2.00	\$7,721,495		
5	14,769.50	75	0.31	3,712,904.61	\$2.00	\$7,425,809		······································
6	10,234.11	63	0.31	2,162,774.47	\$2.00	\$4,325,549		
7	10,234.12	63	0.31	2,162,776.58	\$2.00	\$4,325,553		
8	6,796.77	60	0.25	1,093,532.33	\$2.00	\$2,187,065		
9								
10								
11								
12								
· 13								
14								
	Turnout and Crossing Pumping							
15	Plant Terrace Heights	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$168,0
16	Valves and Maniflod	1	L.S.	\$60,000.00	\$60,000.00			
	Main Pipe 60" dia crossing under			***************************************				
17	plant	80	, I.f.	\$1,100.00	\$88,000.00			
18	Civil, Electrical	1	L.S.	\$20,000.00	\$20,000.00			
19								
	Turnout and Crossing Pumping							
20	Plant 2 (MP16.8)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$334,0
21								
	Flow rate and PRV Valve w/							
22	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000.00			
23	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
	Manifold Piping - 16" to 36" dia.							
24	Steel pipe	18,000	lb.	\$1.50	\$27,000.00			
25	Manifold Fabrication	18,000	lb.	\$2.00	\$36,000.00			
26	Concrete slab and encasement	30	су	\$600.00	\$18,000.00			
27	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
28	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00			
29	Fence	1	L.S.	\$3,000.00	\$3,000.00			
	Main Pipe 63" dia crossing under							
30	plant	100	l.f.	\$1,200.00	\$120,000.00			
31	•							
	Turnout and Crossing Pumping							
32	Plant 3 (MP 22.5)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$349,0
33								
	Flow rate and PRV Valve w/							
34	CheckValve feature - 16"	5	ea	\$15,000.00	\$75,000.00			
35	Butterfly Valve - 16"	10	ea	\$3,000.00	\$30,000.00			
	Manifold Piping - 16" to 36" dia.	.*						
36	Steel pipe	18,000	lb.	\$1.50	\$27,000.00			
37	Manifold Fabrication	18,000	lb.	\$2.00	\$36,000.00			
38	Concrete slab and encasement	30	су	\$600.00	\$18,000.00			
39	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
40	Electrical/Control system	1	L.S.	\$20,000.00	\$20,000.00		I	
41	Fence	1	L.S.	\$3,000.00	\$3,000.00			
	Main Pipe 78" dia crossing under						1	
42	plant	100	l.f.	\$1,350.00	\$135,000.00			
43	<u> </u>		ļ					
44	Earthwork (CY)	ļ						
45	Excavation	<u> </u>					Total	\$2,915,0
46	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
47	78	1,000.00	11.47	11,470	\$5.00	\$57,350.00		
48	78	14,769.50	11.47	169,406	\$5.00	\$847,030.83		
49	75	14,769.50	10.94	161,578	\$5.00	\$807,891.65		
50	63	10,234.11	8.94	91,493	\$5.00	\$457,464.72		
51	63	10,234.12	8.94	91,493	\$5.00	\$457,465.16	I	
52	60	6,796.77	8.47	57,569	\$5.00	\$287,843.21		
53								
54		 	<u> </u>				I	
55	Total		↓					
56		1	ļ					
57	Bedding	ļ	<u> </u>				Total	\$262,1
58	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
59	78	1,000.00	0.20	196	\$25.00	\$4,900		
60	78	14,769.50	0.20	2,895	\$25.00	\$72,371		
61	75	14,769.50	0.19	2,821	\$25.00	\$70,524		
62	63	10,234.11	0.17	1,730	\$25.00	\$43,239		
63	-63	10,234.12	0.17	1,730	\$25.00	\$43,239		
64	60	6,796.77	0.16	1,115	\$25.00	\$27,867		
65								
66								

67	***		·			r		
68	Embedment (.7)						Total	\$2,834,644
69	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
70	78	1,000.00	2.34	2,340	\$25.00	\$58,5	00	
71	78	14,769.50	2.34	34,561	\$25.00	\$864,0		
72	75	14,769.50	2.19	32,375	\$25.00	\$809,3		
73								
	63	10,234.11	1.65	16,876	\$25.00	\$421,9		
74	63	10,234.12	1.65	16,876	\$25.00	\$421,9	02	
75	60	6,796.77	1.52	10,358	\$25.00	\$258,9	57	
76								
77							_	
							_	
78								
79								
80	Compacted Backfill						Total	\$2,283,720
81	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		<u> </u>
82								
	78	1,000.00	7.26	7,262	\$6.00	\$43,5		
83	78	14,769.50	7.26	107,256	\$6.00	\$643,5	37	
84	75	14,769.50	7.00	103,387	\$6.00	\$620,3	19	
85	63	10,234.11	6.03	61,681	\$6.00	\$370,0		
86	63	10,234.12	6.03	61,681				
					\$6.00	\$370,0		
87	60	6,796.77	5.79	39,353	\$6.00	\$236,1	20]]	
88								
89								
90								
91	<u> </u>		ļ					
92	Farm Turnout Tees and Valves				L		Total	\$43,515
93	Size	Quantity	Unit Cost	Cost		1		
94	in	ea	\$/ea	\$		†		
	111	ea .	क्/स्त	φ	ļ	ļ	_	
95						L		
96	8	3	\$1,385.00	\$4,155.00			1	
97	6	12	\$1,150.00	\$13,800.00		1		
98	4	12	\$905.00	\$10,860.00				
						ļ		
99	2	1	\$700.00	\$700.00				
100	Installation	28	\$500.00	\$14,000.00				
101								· · · ·
102	PRV and Valve Vaults			 		 	Total	\$421,000
						ļ	Total	\$431,000
103	Size	Quantity	Unit Cost	Cost				
104	in l	ea	\$/ea	\$				
105			<u> </u>					
106	8	3	\$17,000.00	\$51,000.00	 	 		
						ļ		
107	6	12	\$14,000.00	\$168,000.00				
108	4	12	\$12,000.00	\$144,000.00				
109	2	1	\$12,000.00	\$12,000.00				
110	Installation	28	\$2,000.00	\$56,000.00				
	iristaliation	20	\$2,000.00	\$30,000.00				
111				<u> </u>				
112								
113	Flow Meters and Precast Vaults	***************************************			1		Total	\$149,500
114	Size	Quantity	Unit Cost	Cost			10.00	ψ1·10,000
		Quality	Unit Cost	L COST	1			
115	in	ea	\$/ea	\$				
115 116	in I			\$				
116		ea	\$/ea					
116 117	8	ea 3	\$/ea \$5,500.00	\$16,500.00				
116 117 118	8 6	ea 3 12	\$/ea \$5,500.00 \$4,500.00	\$16,500.00 \$54,000.00				
116 117 118 119	8 6 4	ea 3 12 12	\$/ea \$5,500.00 \$4,500.00 \$4,000.00	\$16,500.00 \$54,000.00 \$48,000.00				
116 117 118	8 6	ea 3 12	\$/ea \$5,500.00 \$4,500.00	\$16,500.00 \$54,000.00				
116 117 118 119 120	8 6 4 2	ea 3 12 12 12 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00				
116 117 118 119 120 121	8 6 4	ea 3 12 12	\$/ea \$5,500.00 \$4,500.00 \$4,000.00	\$16,500.00 \$54,000.00 \$48,000.00				
116 117 118 119 120 121 122	8 6 4 2 Installation	ea 3 12 12 12 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00			T	
116 117 118 119 120 121 122 123	8 6 4 2 Installation	ea 3 12 12 12 1 28	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00			Total	\$429,000
116 117 118 119 120 121 122 123 124	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size	ea 3 12 12 12 1 28 Quantity	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00			Total	\$429,000
116 117 118 119 120 121 122 123	8 6 4 2 Installation	ea 3 12 12 12 1 28	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00			Total	\$429,000
116 117 118 119 120 121 122 123 124	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10"	ea 3 12 12 12 1 28 Quantity	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00			Total	\$429,000
116 117 118 119 120 121 122 123 124 125 126	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size	ea 3 12 12 12 1 28 Quantity 3	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00			Total	\$429,000
116 117 118 119 120 121 122 123 124 125 126 127	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6"	ea 3 12 12 12 1 28 Quantity 3 25	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00				
116 117 118 119 120 121 122 123 124 125 126 127	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings	ea 3 12 12 12 1 28 Quantity 3 25 Quantity	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost Unit Cost	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00			Total	\$429,000
116 117 118 119 120 121 122 123 124 125 126 127 128	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 Cost \$30,000.00				
116 117 118 119 120 121 122 123 124 125 126 127	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings	ea 3 12 12 12 1 28 Quantity 3 25 Quantity	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost Unit Cost	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 Cost \$54,000.00 \$375,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00	ea 3 12 12 11 28 Quantity 3 25 Quantity 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$30,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$30,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$30,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 127 128 129 130 131 131 132 133	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 127 128 129 130 131 131 132	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S.	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00	ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00	ea 3 12 12 12 1 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00	ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 467+00	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 467+00 484+00 - Terrace Height Blvd.	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$11,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 126 127 128 129 130 131 132 133 134 135 136 137 138 139	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 4422+50 441+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00	ea 3 12 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 467+00 484+00 - Terrace Height Blvd.	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$11,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 126 127 128 129 130 131 132 133 134 135 136 137 138 139	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 4422+50 441+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00	ea 3 12 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 137 138 139 140	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 484+00 - Terrace Height Blvd. 495+00 508+00	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00			Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 139 140 141	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00				
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 4422+50 441+00 450+00 450+00 450+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV	ea 3 12 12 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00	\$20,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$375,000.00 \$10,000.00	\$20,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 457+00 450+00 4677+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV Road crossings	ea 3 12 12 12 1 18 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV Road crossings Pipe 33" - Union Gap	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00 \$99,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFN Road crossings Pipe 36" - Selah-Moxee	ea 3 12 12 12 1 18 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 4422+50 441+00 450+00 450+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFN Road crossings Pipe 36" - Selah-Moxee Flow rate and PRV Valve w/	ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$11,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$54,000.00 \$554,	\$30,000.00 \$99,000.00 \$20,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV Road crossings Pipe 36" - Selah-Moxee Flow rate and PRV Valve w CheckValve feature - 16"	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,500.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00 \$99,000.00 \$20,000.00 \$120,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 4422+50 441+00 450+00 450+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFN Road crossings Pipe 36" - Selah-Moxee Flow rate and PRV Valve w/	ea 3 12 12 12 11 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$11,000.00 Unit Cost \$18,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$54,000.00 \$54,000.00 \$554,	\$30,000.00 \$99,000.00 \$20,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148	8 6 4 2 Installation Steel Pipe Xings for Turmouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV Road crossings Pipe 33" - Union Gap Pipe 36" - Selah-Moxee Flow rate and PRV Valve w/ CheckValve feature - 16" Butterfly Valve - 16"	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00 \$99,000.00 \$20,000.00 \$120,000.00		Total	\$180,000
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148	8 6 4 2 Installation Steel Pipe Xings for Turnouts Size Steel Pipe Xings - 10" Steel Pipe Xings - 10" Steel Pipe Xings - 6" Road crossings Hwy 24 34+00 147+00 178+00 210+00 263+00 404+00 422+50 441+00 450+00 450+00 467+00 484+00 - Terrace Height Blvd. 495+00 508+00 ah-Moxee/Union Gap Drop Struc Upstream Shutoff Valve, 36" BFV Road crossings Pipe 36" - Selah-Moxee Flow rate and PRV Valve w CheckValve feature - 16"	ea 3 12 12 12 1 12 1 28 Quantity 3 25 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$/ea \$5,500.00 \$4,000.00 \$4,000.00 \$3,000.00 \$1,000.00 Unit Cost L.S. L.S. L.S. L.S. L.S. L.S. L.S. L.S	\$16,500.00 \$54,000.00 \$48,000.00 \$3,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$28,000.00 \$375,000.00 \$375,000.00 \$10,000.00	\$30,000.00 \$99,000.00 \$20,000.00 \$120,000.00		Total	\$180,000

152	Concrete Outlet Boxes	60	су	\$700.00	\$42,000.00	T	
153	Safety Racks (6x10)	2800	lb	\$4.00	\$11,200.00	1	
154	Excavation	100	cy	\$8.00	\$800.00	1	
155	Compacted Backfill	30	су	\$12.00	\$360.00	1	
156				· · · · · · · · · · · · · · · · · · ·			
157							
158							
159						1	
160							
161	Special Structures						
	Access Manholes, Airvalves						
162	(every 2000')	30	ea	\$7,000.00		Total	\$210,000
163							7=10,000
164	Fence Replacement	50000	l.f.	\$3.00		Total	\$150,000
165							
166					<u> </u>		
167							
168							
169	SCADA	L.S.	\$230,000.00			Total	\$230,000
170							7
171	Subtotal w/o Mobilization					1	\$37,898,195
172	Mobilization 5%						\$1,900,000
173	Subtotal w/ Mobilization		1				\$39,798,195
174	Unlisted 15%						\$5,969,729
175	CONTRACT COST						\$46,000,000
176	Construction Contingences 25%						\$11,500,000
177	FIELD COST				1		\$58,000,000
178			T			1	7.2,2.2,000
179				l''''	1	 1	
180	Right-of-Way	90	acres	\$2,500.00	T	Total	\$225,000
181					1		
182						1	
183							

		Quantity	Unit Cost	Cost		Total	\$1,062,000
190	40" Tytan valve	3	\$150,000.00	\$450,000.00			
191	24" Tytan valve	1	\$25,000.00	\$25,000.00			
192	24" Pressure Relief Valve	1	\$25,000.00	\$25,000.00			
193	Control System		Lump Sum	\$100,000.00			
194	42" Isolation Vavles	6	\$24,000.00	\$144,000.00			
195	24" Isolation Vavles	2	\$9,000.00	\$18,000.00			
196	Manifold		Lump Sum	\$200,000.00			
197	Structure		Lump Sum	\$100,000.00			
198	Subtotal w/o Mobilization						\$1,062,000
199	Mobilization 5%				1		\$53,000
200	Subtotal w/ Mobilization						\$1,100,000
201	Unlisted 15%						\$165,000
202	CONTRACT COST						\$1,250,000
203	Construction Contingences 25%						\$312,500
204	FIELD COST						\$1,600,000
205							, , , , , , , , , , , , , , , , , , , ,
206							
207			1				
208			1				
209			<u> </u>		<u> </u>		
210							
211					1		

Project: Black Rock Project Assessment
Feature: Delivery System to Roza Irrigation District
Pipe with Selah-Moxee and Union Gap Drop Structure and Pumping Plant at Roza Canal

1	Pumping Plant - 10,500 hp			1	1		\$4,750,000
2	ubtotal from Plan 4 (line 170, above	e)					\$37,898,195
3							
4	Revised Subtotal w/o Mobilization						\$42,648,195
5	Mobilization 5%						\$2,100,000
6	Revised Subtotal w/ Mobilization						\$44,748,195
7	Unlisted 15%						\$6,712,229
8	CONTRACT COST						\$51,000,000
9	Construction Contingences 25%						\$12,750,000
10	FIELD COST				1		\$64,000,000
11							
12							
13	Right-of-Way	90	acres	\$2,500.00		Total	\$225,000
14							, , , , , , , , , , , , , , , , , , , ,
15	-						
16							

By: Wendy Christensen

Item	Schedule							
1	Main Pipeline						Total	\$60,156,634
2 3	Length (ft) 1,000,00	Hydraulic (ID) Diameter (in)	Steel Pipe Wall Thickness (in) from Table 4-2* AWWA M11	Pounds	Unit Cost of Steel Pipe	Cost	i samenja	
4	14,769.50	78	0.75	630,870.00	\$2.00	\$1,261,740		·
5	14,769.50	78	0.75	9,317,634.47	\$2.00	\$18,635,269		
6		75	0.75	8,962,723.38	\$2.00	\$17,925,447		
7	10,234.11	63	0.625	4,346,938.22	\$2.00	\$8,693,876		
	10,234.12	63	0.625	4,346,942.47	\$2.00	\$8,693,885		
8	6,796.77	60	0.5625	2,473,208.67	\$2.00	\$4,946,417		***
9								
11								
12								
13								
14								
14		***************************************						ATMINISTRAL
	Turnout and Crossing Pumping							
15	Plant Terrace Heights	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$238,00
16	Valves and Maniflod	1	L.S.	\$120,000.00	\$120,000.00			
	Main Pipe 60" dia crossing under							
17	plant	80	l.f.	\$1,100.00	\$88,000.00			
18	Civil, Electrical	1	L.S.	\$30,000.00	\$30,000.00			
19						·		
20								
21	Bifurcation Structure at TH Plant	1	L.S.	\$10,000.00	\$10,000.00		Total	\$10,000
22								
23								
24								
25	Turnout and Crossing Pumping Plant 2 (MP16.8)	Quantity	Unit Quantity	Unit Cost	Cost	·	Total	\$678,000
26					,			
27	Flow rate and PRV Valve w/ CheckValve feature - 16"	10	ea	\$30,000.00	\$300,000.00			
28	Butterfly Valve - 16"	10	ea	\$6,000.00	\$60,000.00			
29	Manifold Piping - 16" to 36" dia. Steel pipe	36,000	lb.	\$1.50	\$54,000.00			
30	Manifold Fabrication	36,000	lb.	\$2.00	\$72,000.00			
31	Concrete slab and encasement	40	су	\$600.00	\$24,000.00			
32	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
33	Electrical/Control system	1	L.S.	\$40,000.00	\$40,000.00			
34	Fence	1	L.S.	\$3,000.00	\$3,000.00			
	Main Pipe 63" dia crossing under							
35 36	plant	100	I.f.	\$1,200.00	\$120,000.00			
37	Bifurcation Structure at Plant #2						Total	\$60,000
38					ļ			
39	Isolation Valves - 24"	2	ea	\$10,000.00	\$20,000.00			
40	Isolation Valves - 36"	2	. ea	\$20,000.00	\$40,000.00			
41			ļ					
42			ļ					
43	T							
l	Turnout and Crossing Pumping		1		_		I	
44	Plant 3 (MP 22.5)	Quantity	Unit Quantity	Unit Cost	Cost		Total	\$693,000
45	1		ļ					
1	Flow rate and PRV Valve w/						T	
46	CheckValve feature - 16"	10	ea	\$30,000.00	\$300,000.00			
47	Butterfly Valve - 16"	10	ea	\$6,000.00	\$60,000.00		T	
1	Manifold Piping - 16" to 36" dia.		I					
48	Steel pipe	36,000	lb.	\$1.50	\$54,000.00			
49	Manifold Fabrication	36,000	lb.	\$2.00	\$72,000.00			
50	Concrete slab and encasement	40	су	\$600.00	\$24,000.00			
51	Earthwork/sitework	1	L.S.	\$5,000.00	\$5,000.00			
52	Electrical/Control system	1	L.S.	\$40,000.00	\$40,000.00			
53	Fence	1	L.S.	\$3,000.00	\$3,000.00			
 	Main Pipe 78" dia crossing under		1					
54	plant	100	l.f.	\$1,350.00	\$135,000.00	1		

55								
56	Bifurcation Structure at Plant #3						Total	\$60,000
57	Valves			410.000.00	400 000 00			
58	Isolation Valves - 24"	2	ea	\$10,000.00	\$20,000.00			
59	Isolation valves - 36"	2	ea	\$20,000.00	\$40,000.00			
60 61	Earthwork (CY)		·····					
62	Excavation						Total	\$2,915,046
63	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost	Total	\$2,915,040
64	78	1,000.00	11.47	11,470	\$5.00	\$57,350		
65	78	14,769.50	11.47	169,406	\$5.00	\$847,031		
66	75	14,769.50	10.94	161,578	\$5.00	\$807,892		
67	63	10,234.11	8.94	91,493	\$5.00	\$457,465		
68	63	10,234.12	8.94	91,493	\$5.00	\$457,465	····	
69	60	6,796.77	8.47	57,569	\$5.00	\$287,843		
70								
71								
72	Total							
73								
74	Bedding						Total	\$262,140
75	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
76	78	1,000.00	0.20	196	\$25.00	\$4,900		
77	78	14,769.50	0.20	2,895	\$25.00	\$72,371		
78	75	14,769.50	0.19	2,821	\$25.00	\$70,524		
79	63	10,234.11	0.17	1,730	\$25.00	\$43,239		
80	63	10,234.12	0.17	1,730	\$25.00	\$43,239		
81	60	6,796.77	0.16	1,115	\$25.00	\$27,867		
82							····	
83						 		
84 85	Embedment (.7)					 	Tatal	<u> </u>
86	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost	Total	\$2,834,644
87	78	1,000.00	2.34	2,340	\$25.00	\$58,500		A
88	78	14,769.50	2.34	34,561	\$25.00	\$864,016		
89	75	14,769.50	2.19	32,375	\$25.00	\$809,369		
90	63	10,234.11	1.65	16,876	\$25.00	\$421,901		
91	63	10,234.12	1.65	16,876	\$25.00	\$421,902	-	
92	60	6,796.77	1.52	10,358	\$25.00	\$258,957		
93				,				
94								
95								
96			-					
97	Compacted Backfill						Total	\$2,283,720
98	Diameter	Length	Unit Quantity	Quantity	Unit Cost	Cost		
99	78	1,000.00	7.26	7,262	\$6.00	\$43,572		
100	78	14,769.50	7.26	107,256	\$6.00	\$643,537		
101	75	14,769.50	7.00	103,387	\$6.00	\$620,319		
102	63	10,234.11	6.03	61,681	\$6.00	\$370,086		
103	63	10,234.12	6.03	61,681	\$6.00	\$370,086		
104	60	6,796.77	5.79	39,353	\$6.00	\$236,120	ļ	
105						1	ļ	
106					 	 	-	
107					-	<u> </u>	 	
108	Farm Turnout Tees and Valves		<u> </u>			 	Total	\$174,060
110	Size	Quantity	Unit Cost	Cost			iviai	Ψ174,000
111	in	ea	\$/ea	\$		<u> </u>	 	
112		Ju	1	 		1		
113	8	6	\$2,770.00	\$16,620.00				
114	6	24	\$2,300.00	\$55,200.00		1		
115	4	24	\$1,810.00	\$43,440.00				
116	2	2	\$1,400.00	\$2,800.00				
117	Installation	56	\$1,000.00	\$56,000.00				
118								
119	PRV and Valve Vaults						Total	\$862,000
120	Size	Quantity	Unit Cost	Cost				
121	in	ea	\$/ea	\$				
122					<u> </u>			
123	8	6	\$17,000.00	\$102,000.00			<u> </u>	A
124	6	24	\$14,000.00	\$336,000.00			<u> </u>	
125	4	24	\$12,000.00	\$288,000.00	<u> </u>	ļ		
126	2	2	\$12,000.00	\$24,000.00		_	 	·····
127	Installation	56	\$2,000.00	\$112,000.00		-	 	
128			ļ		 	-	 	
129	Flow Meters and Precast Vaults				 	+	Total +	Ø4.40.F00
130		Ougatitus	Unit Coot	Cont	 	 	Total	\$149,500
131	Size	Quantity	Unit Cost	Cost	<u> </u>	_L		

133	132	in	ea	\$/ea	\$		T		
138	133								
136	134	8	3	\$5,500.00	\$16,500.00				
137	135	6	12	\$4,500.00					
139	136	4	12	\$4,000.00	\$48,000.00			1	
139	137	2	1	\$3,000.00	\$3,000.00			1	
140 Steel Pipe Xings for Turnouts Unit Cost	138	Installation	28						
141 Size Pipe Xings 10" 3 \$27,000.00 \$81,00	139		***************************************		· · · · · · · · · · · · · · · · · · ·				
141 Size	140	Steel Pipe Xings for Turnouts	***************************************					Total	\$643,500
142 Steel Pipe Xings - 10" 3 \$27,000.00 \$10,00	141		Quantity	Unit Cost	Cost				
143	142	Steel Pipe Xings - 10"		\$27,000.00	\$81,000.00			†	
144	143								
146		1							
146		Road crossings	Quantity	Unit Cost	Cost			Total	\$180,000
147								1014	Ψ100,000
148									
149							 	<u> </u>	
150									
151									
152							ļ	1	
153									
154									
155									
156									
157									
158								1	
159									
160									
161		508+00	11	L.S.	\$10,000.00				
162 Upstream Shutoff Valve, 36° BFV 2 ea \$20,000.00 \$40,000.00	160								
163	161	ah-Moxee/Union Gap Drop Structi	ure					Total	\$937,879
164		Upstream Shutoff Valve, 36" BFV	2	ea	\$20,000.00	\$40,000.00			
165	163	Road crossings	3	ea	\$10,000.00	\$30,000.00			
165	164	Pipe 33" - Union Gap, 550'	61847.5	l.f.	\$2.00	\$123,695.00			
Flow rate and PRV Valve w Check-Valve feature - 16' 16	165								
166 Check/alve feature - 16" 16 ea \$30,000.00 \$480,000.00					,	7 7			
167 Butterfly Valve - 16" 16 ea \$6,000.00 \$96,000.00	166		16	ea	\$30,000,00	\$480,000,00			
Manifold Piping - 16* to 36* dia. Steel pipes 30000 Ib. \$3.00 \$90,000.00									
168			10	Ça	φ0,000.00	\$30,000.00		ļ	
169	169		30000	ib.	\$2.00	¢00,000,00			
170				·			 		
171									
172 Compacted Backfill 30 6y \$12.00 \$360.00								ļ	
173								ļ	
174		Compacted Backfill	30	су	\$12.00	\$360.00		 	
175 176								<u> </u>	
176 177 178 Special Structures 179 420,000 Total \$420,000 180 181 Fence Replacement 50000 I.f. \$3.00 Total \$150,000 182 183 184 185 186 SCADA L.S. \$460,000.00 Total \$460,000 187 188 Subtotal w/o Mobilization \$74,168,123 189 Mobilization \$74,168,123 189 Mobilization \$77,968,123 190 Subtotal w/o Mobilization \$77,968,123 191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 199 19									
177 178 Special Structures			~~~~					<u> </u>	
178			······						
Access Manholes, Airvalves (every 2000') 30 ea \$14,000.00 Total \$420,000									
179	178								
180 Fence Replacement 50000 I.f. \$3.00 Total \$150,000 182 <									
180 Fence Replacement 50000 I.f. \$3.00 Total \$150,000 182 SCADA	179	(every 2000')	30	ea	\$14,000.00			Total	\$420,000
182 183 184 185 185 186 187 188 Subtotal w/o Mobilization \$74,168,123 189 Mobilization 5% 190 Subtotal w/ Mobilization 191 Unlisted 15% 192 CONTRACT COST 193 Construction Contingences 25% 194 FIELD COST 195 \$23,000,000 196 \$113,000,000 197 Right-of-Way 90 198 \$2,500.00 Total \$225,000 199 199 \$25,000 \$225,000									
182 183 184 185 186 SCADA 187 188 Subtotal Wo Mobilization 189 Mobilization 5% 190 Subtotal W Mobilization 191 Unlisted 15% 192 CONTRACT COST 193 Construction Contingences 25% 194 FIELD COST 195 \$23,000,000 196 \$113,000,000 197 Right-of-Way 90 198 199 Total		Fence Replacement	50000	I.f.	\$3.00			Total	\$150,000
184 185 186 SCADA L.S. \$460,000.00 Total \$460,000 187 188 Subtotal Wo Mobilization \$74,168,123 \$74,168,123 \$3,800,000 189 Mobilization 5% \$3,800,000 \$77,968,123 \$77,968,123 \$19 \$11,695,218 \$90,000,000 \$116,695,218 \$90,000,000 \$90,000,000 \$90,000,000 \$90,000,000 \$23,000,000 \$23,000,000 \$194 FIELD COST \$23,000,000 \$113,000,000 \$195 \$113,000,000 \$196 \$197 Right-of-Way 90 acres \$2,500.00 Total \$225,000	182							T T	
184 185 186 SCADA L.S. \$460,000.00 Total \$460,000 187 188 Subtotal Wo Mobilization \$74,168,123 \$74,168,123 \$3,800,000 189 Mobilization 5% \$3,800,000 \$77,968,123 \$77,968,123 \$19 \$11,695,218 \$90,000,000 \$116,695,218 \$90,000,000 \$90,000,000 \$90,000,000 \$90,000,000 \$23,000,000 \$23,000,000 \$194 FIELD COST \$23,000,000 \$113,000,000 \$195 \$113,000,000 \$196 \$197 Right-of-Way 90 acres \$2,500.00 Total \$225,000	183								
185 SCADA L.S. \$460,000.00 Total \$460,000 187 Subtotal W/o Mobilization \$74,168,123 189 Mobilization 5% \$3,800,000 190 Subtotal W/o Mobilization \$77,968,123 191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 \$197 197 Right-of-Way 90 acres \$2,500.00 198 \$199 \$25,000	184								
186									
187 Subtotal w/o Mobilization \$74,168,123 188 Subtotal w/o Mobilization 5% \$3,800,000 190 Subtotal w/ Mobilization \$77,968,123 191 Unlisted 15% \$77,968,123 192 CONTRACT COST \$116,95,218 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000		SCADA	L.S.	\$460,000.00				Total	\$460,000
188 Subtotal W/o Mobilization \$74,168,123 189 Mobilization 5% \$3,800,000 190 Subtotal W/ Mobilization \$77,968,123 191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000 \$23,000 \$23,000 \$23,000				1				. 3101	+ 100,000
189 Mobilization 5% \$3,800,000 190 Subtotal w/ Mobilization \$77,968,123 191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000 \$25,		Subtotal w/o Mobilization		1			 	†	\$74 168 123
190 Subtotal w/ Mobilization \$77,968,123 191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 \$197 197 Right-of-Way 90 acres \$2,500.00 \$25,000 198 \$199 \$25,000 \$25,000 \$25,000				1			 	 	
191 Unlisted 15% \$11,695,218 192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000 \$25,000 \$25,000 \$25,000 \$25,000				1				 	
192 CONTRACT COST \$90,000,000 193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 \$197 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000 \$				_			 	 	
193 Construction Contingences 25% \$23,000,000 194 FIELD COST \$113,000,000 195 \$196 \$113,000,000 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 \$199 \$25,000					 	-	 	 	
194 FIELD COST \$113,000,000 195 196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 199							ļ	 	
195				 		ļ	ļ	 	
196 197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 199 199 199 199 199		FIELD COST		ļ				<u> </u>	\$113,000,000
197 Right-of-Way 90 acres \$2,500.00 Total \$225,000 198 199 <td></td> <td></td> <td></td> <td><u> </u></td> <td> </td> <td></td> <td></td> <td></td> <td></td>				<u> </u>	 				
198 199									
199		Right-of-Way	90	acres	\$2,500.00			Total	\$225,000
200									
	200								

Item	Schedule			т			
1	Pump Station #1 (MP 20.6) - 256 cfs			11.71.0.1		Total	\$948,200
2	Item	Quantity	Unit	Unit Cost	Cost		····
3	1	100		4700.00			·
4	Concrete - plant and check structure	180	cy	\$700.00	\$126,000		
5	Trashrack (12 x 60)	15000	lb .	\$4.00	\$60,000		
6 7	Excavation Compacted Backfill	1000	су	\$8.00	\$8,000		
8		300	су	\$12.00	\$3,600		
9	110 hp vertical propeller pumps - fixed 110 hp vertical propeller pumps -vfd	<u>4</u> 2	ea	\$82,500.00	\$330,000		
10	Manifold	20000	ea	\$91,300.00 \$3.00	\$182,600		
11	24" Check Valves		lb as	\$20,000.00	\$60,000		
12		6	ea		\$120,000		
13	24" Butterfly Valves	6	ea	\$5,000.00	\$30,000		
	Power supply	1	L.S.	\$25,000.00	\$25,000		
14	Walkway	150	ft ²	\$20.00	\$3,000		
15							
16							
17	Pump Station #2 (MP 18.7) - 240 cfs		1			Total	\$901,600
18					<u>:</u>		
19							
20	Concrete - plant and check structure	180	су	\$700.00	\$126,000		
21	Trashrack (12 x 60)	15000	lb i	\$4.00	\$60,000		
22	Excavation	1000	су	\$8.00	\$8,000		
23	Compacted Backfill	300	су	\$12.00	\$3,600		
24	100 hp vertical propeller pumps - fixed	4	ea	\$75,000.00	\$300,000		
25	100 hp vertical propeller pumps -vfd	2	ea	\$83,000.00	\$166,000		
26	Manifold	20000	lb ·	\$3.00	\$60,000		
27	24" Check Valves	6	ea	\$20,000.00	\$120,000		
28	24" Butterfly Valves	. 6	ea	\$5,000.00	\$30,000		
29	Power supply	1	L.S.	\$25,000.00	\$25,000		
30	Walkway	150	ft ²	\$20.00	\$3,000		
31							
32							
33							·
34							
35	Pump Station #3 (MP 16.8) - 236 cfs	*****				Total	\$862,400
36							
37		**************************************					
38	Concrete - plant and check structure	180	су	\$700.00	\$126,000		
39	Trashrack (12 x 50)	12000	lb	\$4.00	\$48,000		
40	Excavation	800	cy	\$8.00	\$6,400		
41	Compacted Backfill	250	cy	\$12.00	\$3,000		
42	100 hp vertical propeller pumps - fixed	4	ea	\$75,000.00	\$300,000		
43	100 hp vertical propeller pumps -vfd	2	ea	\$83,000.00	\$166,000		
44	Manifold	20000	lb lb	\$3.00	\$60,000		
45	24" Check Valves	6	ea	\$20,000.00	\$120,000		***************************************
46	24" Butterfly Valves	6	ea	\$5,000.00	\$30,000		
47	Walkway	150	ft ²	\$20.00	\$3,000		
48	vvaikway	130	11	\$20.00	\$3,000		
49							···
50							
51							
52	Pump Station #4 (MP 13) - 156 cfs					Total	ACO4 750
53	Fullip Station #4 (MF 13) - 130 CIS					Total	\$631,750
54							
55	Concrete plant and shook structure	100		#700 00	#D4 000		
	Concrete - plant and check structure	120	<u>cy</u>	\$700.00	\$84,000		
56	Trashrack (12 x 50)	12000	lb .	\$4.00	\$48,000		
57	Excavation	800	су	\$8.00	\$6,400		
58	Compacted Backfill	250	су	\$12.00	\$3,000		······································
59	85 hp vertical propeller pumps - fixed	3	ea	\$63,750.00	\$191,250		
60	85 hp vertical propeller pumps -vfd	2	ea	\$70,550.00	\$141,100		
61	Manifold	15000	lb .	\$3.00	\$45,000		
62	18" Check Valves	. 5	ea	\$18,000.00	\$90,000		
63	18" Butterfly Valves	5	ea	\$4,000.00	\$20,000		
64	Walkway	150	ft ²	\$20.00	\$3,000		
65							
66							
67	Belah-Moxee/Union Gap Drop Structure	9				Total	\$459,640
68							
69	Road crossings	3	ea	\$10,000.00	\$30,000		
70	Pipe 33" - Union Gap	550	l.f.	\$180.00	\$99,000		
71	Pipe 36" - Selah-Moxee	100	l.f.	\$200.00	\$20,000		
72	Upstream Gate Structure Concrete	120	су	\$700.00	\$84,000		
		4	· · · · · · · · · · · · · · · · · · ·				

73	Trash racks (12x24)	16000	lb.	\$4.00	\$64,000		
74	Slide gates/operators	. 4	ea	\$20,000.00	\$80,000		
75	Concrete Baffled Outlets	100	су	\$700.00	\$70,000		
76	Safety Racks (6 x 10)	2800	lb	\$4.00	\$11,200		
77	Excavation	120	су	\$8.00	\$960		
78	Compacted Backfill	40	су	\$12.00	\$480		
79							
80	Terminal check	30.00	су	700		Total	\$21,000
81							
82							
83	SCADA	L.S.	\$300,000.00			Total	\$300,000
84	·						
85	Subtotal w/o Mobilization						\$4,124,590
86	Mobilization 5%			·			\$210,000
87	Subtotal w/ Mobilization			-			\$4,334,590
88	Unlisted 15%						\$650,189
89	CONTRACT COST						\$5,000,000
90	Construction Contingences 25%						\$1,250,000
91	FIELD COST						\$6,300,000
92							
93							
94	Right-of-Way	10	acres	\$2,500.00		Total	\$25,000
95							